

1. (Twice Amended) A matrix panel display apparatus comprising:

plural signal lines and plural scanning lines intersecting each other and, near each intersection point, a picture element including a picture element electrode, a counter electrode, a display medium disposed between said picture element electrode and said counter electrode, and a transistor for applying image signals from said signal line to said picture element electrode, said transistor being controlled in response to scanning signals received on a scanning line; and

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means for generating auxiliary signals for increasing [the] effective voltages of said image signals and for applying said auxiliary signals to all of said picture elements [while each of] during a predetermined period in which all of said transistors [is] are in a non-conducting state and [each] none of said picture elements is [not] selected.

2. (Twice Amended) A matrix panel display apparatus comprising:

plural signal lines and plural scanning lines intersecting each other and, near each intersection point, a picture element including a picture element electrode, a counter electrode, a display medium disposed between said picture element electrode and said counter electrode, and a transistor for applying image signals from said signal line to

said picture element electrode, said transistor being controlled in response to scanning signals received on a scanning line; and

means for generating auxiliary signals for increasing [the] effective voltages of said image signals and for applying said auxiliary signals to all of said picture element electrodes [while each of] during a predetermined period in which all of said transistors [is] are in a [non-conductive] non-conducting state and [each] none of said picture elements is [not] selected.

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3. (Twice Amended) A matrix panel display apparatus comprising:

plural signal lines and plural scanning lines intersecting each other and, near each intersection point, a picture element including a picture element electrode, a counter electrode, a display medium disposed between said picture element electrode and said counter electrode, and a transistor for applying image signals from said signal line to said picture element electrode, said transistor being controlled in response to scanning signals received on scanning lines; and

means for generating auxiliary signals for increasing [the] effective voltages of said image signals and for applying said auxiliary signals to all of said counter electrodes [while each of] during a predetermined period in which all of said transistors [is] are in a [non-conductive]

non-conducting state and [each] none of said picture elements is [not] selected.

4. (Amended) A matrix panel display apparatus according to claim 1, 2₁ or 3, wherein said means for generating said auxiliary signals operates in response to information from a system circuit which originally generates image signals.

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5. (Amended) A matrix panel display apparatus according to claim 1, 2₁ or 3, wherein said means for generating auxiliary signals is provided in a scanning circuit for applying said scanning signals to said scanning lines.

7. (Amended) A matrix panel display apparatus according to claim 1, 2₁ or 3, wherein waveforms and amplitudes of said auxiliary signals are variable.

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8. (Amended) A matrix panel display apparatus according to claim 1, 2₁ or 3, wherein said auxiliary signals are independent of said image signals.

9. (Amended) A matrix panel display apparatus according to claim 1, 2₁ or 3, wherein said display medium is a liquid crystal.

10. (Amended) A matrix panel display apparatus according to claim 1, 2₁ or 3, wherein [the] time [average] averages of

11. (Amended) A matrix panel display apparatus according to claim 1, 2, or 3, wherein said means for generating said auxiliary signals [comprises] includes:

an auxiliary signal generating circuit for generating said auxiliary signals; and

auxiliary signal information generation means for inputting information to determine waveforms of said auxiliary signals [into] to said means for generating said auxiliary signals.

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12. (Amended) A matrix panel display apparatus according to claim 1, 2, or 3, wherein said auxiliary signal information generation means is an apparatus using variable resistances.

13. (Amended) A matrix panel display apparatus according to claim 1, 2, or 3, wherein said transistors are thin film transistors (TFTs). [Thin Film Transistors (TFT).]

14. (Twice Amended) A matrix panel display apparatus according to claim 1, 2, or 3, wherein said apparatus further comprises:

a signal circuit for applying image signals to said signal lines; and

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a scanning circuit for applying scanning signals to said scanning lines, having a first signal generation means for turning said transistors to a conducting state and for selecting said picture elements thereby, and a second signal generation means for continually supplying said auxiliary signals.

Claim 15, line 2, the change requested in the preliminary amendment of August 18, 1994, should read: after "in" (first occurrence) insert --a--.

15. (Amended) A method for driving a matrix panel display apparatus which selects plural picture elements arranged in a matrix [state] in turn and inputs signals including image information [into] to said selected picture elements, said method comprising the [step] steps of:

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applying first signals depending on said image information to said selected picture elements; and
applying second signals including auxiliary signals for increasing [the] effective voltages of said first signals[, which are inputted] to all of said picture elements during a [non-selected state] predetermined period in which none of said picture elements[,] is selected. [to said picture elements.]

16. (Amended) A method for driving a matrix panel display apparatus which selects plural picture elements arranged in a

matrix [state] in turn and inputs signals including image information [into] to said selected picture elements, said method comprising the [step] steps of:

applying first signals depending on said image information to said selected picture elements; and

applying second signals including auxiliary signals, independent of said image information, for increasing [the] effective voltages of said first signals[, which are inputted] to all of said picture elements during a [non-selected state of] predetermined period in which none of said picture elements is selected.

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17. (Twice Amended) A matrix panel display apparatus comprising:

plural signal lines and plural scanning lines intersecting each other and, near each intersection point, a picture element including a picture element electrode, a counter electrode, a display medium disposed between said picture element electrode and said counter electrode, and a transistor for applying image signals from said signal line to said picture element electrode, said transistor being controlled in response to scanning signals received on a scanning line;

a plurality of storage capacitances, each connected ||^/ to a respective one of said picture elements;

picture signal generating means in a signal circuit for dividing plural picture elements selected at the same time

into two groups and for applying a first picture signal group to a first group of picture elements and a second picture signal group, having a polarity reverse to the first picture signal group, to a second group of picture elements; and

bias signal generating means for applying a first bias signal group, having a polarity reverse to said first picture signal group, to said first group of picture elements through storage capacitances in said first group of picture elements and for applying a second bias signal group, having the polarity reverse to said second picture signal group, to said second group of picture elements through storage capacitances in said second group of picture elements, during a selection period of said first and second groups of picture elements.

19. (Twice Amended) A matrix panel display apparatus according to claim 17 or 18, wherein in each of said first image signal group and said second image signal group, the polarity of said image signals are reversed in successive [frame] frames.

21. (Amended) A matrix panel display apparatus according to claim 17 or 18, wherein each picture element group consisting of the picture elements of every n column elements [($n \geq 1$)] ($n \geq 1$) is alternately assigned to said first group of picture elements and said second group of picture elements, respectively.

22. (Amended) A matrix panel display apparatus according to claim 17 or 18, wherein[;] a control terminal of each transistor is connected to a scanning line, a main terminal thereof to a signal line, and the other main terminal thereof to one of the terminals of said picture element electrode and said storage capacitance; and

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wherein two groups of said bias signals, having a polarity reverse to each of said two image signal groups, are applied to said storage capacitances in each of said picture element groups, respectively.

24. (Twice Amended) A matrix panel display apparatus according to claim 17 or 18, wherein[;] a terminal of a storage capacitance belonging to said first group of picture elements is connected to a scanning line which is located one line before a line being scanned presently;

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wherein a terminal of a storage capacitance belonging to said second group of picture elements is connected to a scanning line which is located one line behind a line being scanned presently;

wherein said bias signal generating means operates to apply a first bias signal to a scanning line which is located one line before a line being scanned presently and to apply a second bias signal of the polarity reverse to said first bias signal to a scanning line which is located one line behind a line being scanned presently, while one scanning line is selected; and

wherein said apparatus further [including] comprises an image signal generating circuit which applies image signals having a polarity reverse to said first bias signal to said first group of picture elements and image signals having the polarity reverse to said second bias signal to said second group of picture elements.

25. (Amended) A matrix panel display apparatus according to claim 24, wherein each picture element group consisting of picture elements of every n column elements [(n \geq 1)] (n \geq 1) is alternately assigned to said first group of picture elements and said second group of picture elements, respectively.

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26. (Amended) A matrix panel display apparatus according to claim 24, wherein said scanning signal generating circuit generates bias voltages [so as] such that, when a scanning pulse is applied to said scanning line, each polarity of said first bias signal and said second bias signal applied to said scanning line is constant independently of said scanned line in one frame period.

27. (Twice Amended) A matrix panel display apparatus according to claim 24, further [including:] comprising a scanning signal generating circuit which generates bias voltages such that, when a scanning pulse is applied to said scanning line, [so that] the polarity of said first bias signal group and said second bias signal group applied to said

scanning line is alternately reversed as said scanning pulse transfers in turn on said scanning lines; [and]

wherein said image signal generating circuit generates image signals so that the polarity of said first image signal and said second image signal is alternately reversed in every scanning period as said scanning pulse transfers in turn on said scanning lines.

28. (Amended) A matrix panel display apparatus according to claim 24, wherein said image signal generating circuit [comprises] includes:

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a second image signal generating part for applying image signals to a second group of picture elements.

29. (Twice Amended) A matrix panel display apparatus according to claim 24, wherein said image signal generating circuit [comprises] includes:

a first latch for storing image signals in turn;[,]

a second latch for storing image signals which are synchronized with a horizontal synchronizing signal;[,]

a third latch capable of either latching said image signals or passing said image signals; and

a sample hold circuit for generating said image signals.

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30. (Amended) A matrix panel display apparatus according to claim 24, wherein said scanning circuit executes [the] interlaced scanning.

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34. (Twice Amended) A method for driving a matrix panel display apparatus having plural signal lines and plural scanning lines intersecting each other and, near each intersection point, a picture element including a picture element electrode, a counter electrode, a display medium disposed between said picture element electrode and said counter electrode, and a transistor for applying image signals from said signal line to said picture element electrode, said transistor being controlled in response to scanning signals received on a scanning line, said method comprising the steps of:

dividing plural picture elements which are to be selected at the same time into two groups;

applying a first picture signal group to a first group of picture elements and a second picture signal group, having a polarity reverse to said first picture signal group, to said second group of picture elements; and

applying a first bias signal group having a polarity reverse to said first picture signal group to said first group of picture elements through storage capacitances in said first group of picture elements, and applying a second bias signal group having a polarity reverse to said second picture signal group to said second group of picture elements through storage